

GEORGIA PEER REVIEW EVALUATION

Address: _____ GW&PCA/GRWA District #: _____

_____ Water System Name: _____
_____ Reviewer Name: _____
_____ Date: _____

Contact Name: _____

Operator Name: _____

Phone #: _____

Well Water Sources I

- | | |
|---|--|
| 1. Are all permits posted or on file at the treatment facility or water system office?
Q Yes Q No | 8. Are there adequate well seals?
Q Yes Q No |
| 2. Is adequate wellhead protection being implemented?
Q Yes Q No | 9. Were wells drilled by a certified well driller?
Q Yes Q No |
| 3. Is the well:
Q Yes Q No More than 50 feet from a septic tank?
Q Yes Q No More than 100 feet from a septic tank absorption field?
Q Yes Q No More than 10 feet from a sewer?
Q Yes Q No More than 1,000 feet from a solid waste disposal site?
Q Yes Q No Near any open, abandoned wells?
Q Yes Q No Protected from other sources of possible contamination?
Q Yes Q No Withdrawing more than 10,000gpd? | 10. What is the depth of the casing? _____ feet
11. What is the depth of grouting? _____ feet
12. Does the well have a suitable raw water sampling cock (For example: smooth nosed, turned down and no threads) before or after the check valve?
Q Yes Q No
13. Is a drawdown gauge available, in good repair and used properly?
Q Yes Q No
14. Are foot/check valves accessible for cleaning?
Q Yes Q No
15. Does the pumphouse interior:
Q Yes Q No Appear well maintained?
Q Yes Q No Have ponding of water on the floor?
Q Yes Q No Have floor drains that lead to a dry well to a sewer or septic tank?
Q Yes Q No Are there cracks in the floor? |
| 4. Is the well site subject to flooding?
Q Yes Q No | 16. Are the site buildings properly maintained and adequately protected from vandals?
Q Yes Q No |
| 5. Is the well site properly graded to channel water away from the well?
Q Yes Q No | |
| 6. Are there other wells in the zone of influence?
Q Yes Q No | |
| 7. Are there any unprotected direct openings into the well or surrounding the well? | |

WELL WATER SOURCES I

Water System Name: _____

Reviewer Name:_____

Date: _____

17. Is the air/vacuum relief valve properly installed and screened ?
Q Yes **Q** No

18. Are check valves, blowoff valves, and water meters maintained and operating properly?
Q Yes Q No

19. Is well discharge piping properly equipped from well to distribution? (Check all that apply)
- Q** Check Valve **Q** Pressure Gauge
Q Flow Measuring Device **Q** Shutoff Valve

20. Are pumps and motors adequately protected?
(Check all that apply)
Q Lighting Q Single Phase
Q Low Suction Q Other _____

21. Are all chemicals, lubricants, and fuels properly stored segregating incompatible chemicals?
Q Yes **Q** No

22. Is adequate spill protection and containment in place around chemical and fuel storage tanks?
Q Yes Q No

23. Are there provisions for emergency chlorination?
Q Yes Q No

24. Does the county have an approved Water Supply?
Q Yes **Q** No

Recommendations:

WATER TREATMENT II

Water System Name: _____

Reviewer Name: _____

Date: _____

1. Attach a sketch of the treatment train and indicate where chemicals are added.
2. Are as-built drawings of the plant available?
Q Yes **Q** No
3. Are flows within design specification?
Q Yes **Q** No
4. Do there appear to be design flaws with the system?
Q Yes (explain) **Q** No
5. Are additional processes or equipment needed?
Q Yes (explain) **Q** No

Chemical-General

6. What pretreatment chemicals and processes are used to deal with water quality challenges? (Check all that apply)
Q potassium permanganate **Q** lime
Q sodium hydroxide **Q** copper sulfate
Q sodium carbonate **Q** activated carbon
Q sodium bicarbonate **Q** chlorine **Q** aeration
Q other
7. Are chemical application points optimally placed so they do not cancel or conflict with each other? (For example: chlorine and activated carbon)
Q Yes **Q** No
8. Are chemicals properly stored?
Q Yes **Q** No
9. Are chemical dosages calculated properly?
Q Yes **Q** No
10. Is the water supply line to the chemical feed system properly safeguarded?
Q Yes **Q** No
11. Is chemical feed equipment properly maintained, calibrated, and in good operating condition?
Q Yes **Q** No (explain)

12. Are there sufficient alternative processes, spare parts, and backup equipment?
Q Yes **Q** No (explain)
13. Do the daily logs accurately record all chemicals added to the water?
Q Yes **Q** No
14. Does the plant have an on-site chemical Quality Assurance/Quality Control program?
Q Yes **Q** No
15. What process control testing is done to determine effectiveness of treatment? (Check all that apply)
Q jar testing **Q** turbidity
Q stream current detectors **Q** alkalinity
Q hardness **Q** chlorine residual **Q** temperature **Q** pH
Q other _____ **Q** other _____
16. Are safe practices followed during chemical handling and mixing?
Q Yes **Q** No
17. Are there adequate spill containment provisions?
Q Yes **Q** No Explain: _____

18. Is appropriate safety equipment available and in use? (For example: self-contained breathing apparatus, goggles, gloved, eye wash, etc.)
Q Yes **Q** No
19. Have operators been trained to use the safety equipment?
Q Yes **Q** No
20. Are the appropriate lighting, guards and railing, etc. in place?
Q Yes **Q** No

WATER TREATMENT II

Water System Name: _____

Reviewer: _____

Date: _____

- | | |
|--|--|
| <p>21. Are there other safety concerns such as electrical hazards?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>22. Can the operator answer basic questions about the treatment process, including what is done, as well as when and why things are done?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>23. Is operator training needed on any aspect of operation and maintenance?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>24. Have there been any interruptions in disinfection?
 <input type="checkbox"/> Yes (explain) <input type="checkbox"/> No

 _____</p> <p>25. Is there at least a 0.2 mg/l disinfectant residual throughout the distribution system at all times?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>26. What disinfectant residual is maintained at the plant tap? _____</p> <p>27. Is there sufficient contact time between the disinfectant point and the first point of use?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>28. What are the contact time values for the plant?(1cq) _____</p> <p>Hypochlorite</p> <p>29. Is hypochlorite used for disinfection?
 <input type="checkbox"/> Yes What type _____
 <input type="checkbox"/> No (Go to question 49)</p> <p>30. Where are the application points for hypochlorite? (Check all that apply)
 <input type="checkbox"/> Intake <input type="checkbox"/> Flash Mix
 <input type="checkbox"/> Flocculation Basin <input type="checkbox"/> Top of Filters</p> | <p><input type="checkbox"/> Sedimentation Basin <input type="checkbox"/> Clearwell
 <input type="checkbox"/> Other _____</p> <p>31. Do daily operating records reflect hypochlorite dosages, chlorine residuals, etc.?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>32. Is the hypochlorite feed pump rate in proportion to the rate of flow through the plant?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>33. Is the mixing during chlorination adequate?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>34. When was the latest calibration of the chemical feed equipment? _____</p> <p>35. Is there an alarm tied to interruptions in hypochlorite feed?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>36. Are instrumentation and automatic and manual controls for the process Adequate? <input type="checkbox"/> Yes <input type="checkbox"/> No
 Operational? <input type="checkbox"/> Yes <input type="checkbox"/> No
 Utilized? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>37. Are there sufficient Backup equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No
 Alternate processes? <input type="checkbox"/> Yes <input type="checkbox"/> No
 Spare parts? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>38. What is the condition of the: Chemical Feed equipment? <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Excellent
 Back up equipment? <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Excellent
 Spare parts? <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Excellent
 Day tanks? <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Excellent</p> <p>39. How often are the pumps and injection lines cleaned? _____</p> |
|--|--|

40. Is the solution tank covered to minimize corrosive vapors?
Q Yes Q No

WATER TREATMENT II

Water System Name: _____

Reviewer: _____

Date: _____

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|---|---|
| 41. Are safe practices followed during chemical handling and mixing?
Q Yes Q No | 49. Is chlorine gas being used
Q Yes Q No (Go to question 88) |
| 42. Is appropriate safety equipment available and in use? (For example: self-contained breathing apparatus, goggles, gloves, eyewash, etc.)
Q Yes Q No | 50. Where are the injection points for chlorine? (Check all that apply)
Q Intake Q Flash Mix
Q Flocculation Basin Q Top of Filters
Q Plant Pond Q Post Mixer
Q Sedimentation Basin Q Clearwell
Q Other |
| 43. Are the appropriate lighting, guards and railings etc., in place?
Q Yes Q No | 51. What is the average daily chlorine usage (in pounds)? _____ |
| 44. Are there other safety concerns such as electrical hazards?
Q Yes Q No | 52. Do daily operating records reflect dosages, chlorine residual, etc.?
Q Yes Q No |
| 45. Are there adequate spill containment provisions?
Q Yes Q No | 53. Is the chlorine feed rate in proportion to the water flow rate?
Q Yes Q No |
| 46. Are there any cross connections between the chemical feed makeup Water and injection points?
Q Yes Q No | 54. Is there an alarm tied to interruption in the chlorine feed?
Q Yes Q No |
| 47. Are there any cross connections in the piping that provides split feed to both raw and finished water?
Q Yes Q No | 55. If more than one cylinder is used, are they manifolded with an automatic switch over to prevent running out of chlorine?
Q Yes Q No |
| 48. Can the operator answer basic questions about the treatment process, including what is done, as well as when and why things are done?
Q Yes Q No | 56. Are the cylinders on a working scale?
Q Yes Q No |
| Chlorine Gas | 57. Are cylinder-mounted vacuum regulators used instead of pressurized metal feed lines?
Q Yes Q No |
| | 58. Are the cylinders in use open a "quarter-turn" with a wrench in place for quick turnoff? |

Q Yes Q No

59. Is the water supply to the chlorinator adequate?
Q Yes Q No
60. Are there any potential cross connections between the chlorine feed makeup water and injection points?
Q Yes Q No
61. Are there any potential cross connections in the piping that provides split feed to both raw and finished water?
Q Yes Q No

WATER TREATMENT II

Water System Name: _____

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- | | |
|--|--|
| 62. Is there at least a 30-day supply of chlorine on hand?
Q Yes Q No | 69. How many individuals are present when cylinders are changed? _____ |
| 63. Is chlorine and other oxidizers properly stored and segregated from incompatible chemicals?
Q Yes Q No | 70. Is the chlorination room separate from the office and the rest of the treatment facility?
Q Yes Q No |
| 64. Are the cylinders restrained to prevent falling?
Q Yes Q No

Are they marked to indicate empty or full? Q Yes Q No | 71. Does the chlorination room have adequate ventilation at floor and inlet air supply from across the room at ceiling level?
Q Yes Q No |
| 65. Are there means for chlorine leak detection?
Q Yes Q No | 72. Is the vent switch located outside and by the door?
Q Yes Q No |
| 66. If automatic detectors are being used:
Date of last test? _____
What is the detection level? _____
Is sensor tube screened? Q Yes Q No
Is sensor tube screened? Q Yes Q No | 73. Is temperature being monitored in the chlorine feed room?
Q Yes Q No |
| 67. Are there adequate leak containment provisions?
Q Yes Q No | 74. Does the door to the chlorine room:
Q Open outward? Q Yes Q No
Q Have a panic bar? Q Yes Q No
Q Have a window? Q Yes Q No
Q Have proper labeling? Q Yes Q No |
| 68. Are safe practices followed during cylinder changes?
Q Yes Q No | 75. Is there a chlorine cylinder repair kit on site? Q Yes If "yes" where is it stored? _____ Q No |
| | 76. Is there a chlorine emergency response plan?
Q Yes Date of last practice _____ |

Q No

77. Is appropriate safety equipment available and in use? (For example: self-contained breathing apparatus, goggles, gloves, eyewash, etc.)
Q Yes Q No
78. Are self-contained breathing apparatus readily available and stored outside of the chlorine room?
Q Yes Q No
79. Do all personnel receive training in the use of self-contained breathing apparatus and participate in periodic practice?
Q Yes Date of last practice _____
Q No
80. If chlorine cylinders are transported on site by water system personnel, are requirements of 49 CFR Parts 171 and 172 being adhered to? Q Yes Q No

RMP in place? Q Yes Q No
81. Are instrumentation and automatic and manual controls for the chlorination process: Adequate? Q Yes Q No
Operational? Q Yes Q No
Utilized Q Yes Q No
82. Is there sufficient:
Backup equipment? Q Yes Q No
Alternate processes? Q Yes Q No
Spare parts? Q Yes Q No

WATER TREATMENT II

Water System Name: _____
Reviewer: _____
Date: _____

83. What is the condition of the:
Chlorine feed equipment?
Q Poor Q Fair Q Good Q Excellent
Backup equipment?
Q Poor Q Fair Q Good Q Excellent
Spare Parts?
Q Poor Q Fair Q Good Q Excellent
84. Is there a drain in the chlorine room?
Q Yes Q No
If there is a drain is it plumbed properly?
Q Yes Q No
85. Are the appropriate lighting, guards and rails, etc. in place?
Q Yes Q No
86. Are there other safety concerns such as electrical hazards?
Q Yes Q No
87. Can the operator answer basic questions about the chlorine treatment process, including when and why it is done?

Q Yes Q No

Ultraviolet Treatment

88. Is an ultraviolet (UV) unit being used?
Q Yes Q No (Go to question 101)
89. Is there an operation and maintenance manual and standard operating procedures for the UV unit?
Q Yes Q No
90. Are flows and turbidity levels within the design specifications of the UV unit?
Q Yes Q No
91. Are instrumentation and automatic and manual controls for the process:
Adequate? Q Yes Q No
Operational? Q Yes Q No
Utilized? Q Yes Q No
92. Is there adequate turbulence and mixing to avoid short circuiting and to ensure good exposure?
Q Yes Q No
93. What is the condition of:
UV unit Q Good Q Fair
Q Poor Backup units Q Good Q Fair
Q Poor Spare parts Q Good Q Fair
Q Poor
94. Are UV units inspected and cleaned periodically?
Q Yes Last service
date_____ Q No
95. What is the frequency for inspection and cleaning?_____
96. Is adequate process control testing being done to determine the effectiveness of the UV unit?
Q Yes Q No
97. Are the appropriate lighting, guards and railings etc., in place?
Q Yes Q No
98. Are there other safety concerns such as electrical hazards?
Q Yes Q No
99. Are safe practices followed during operation

and maintenance of the UV unit?

Q Yes Q No

100. Can the operator answer basic questions about the treatment process, including what is done, as well as when and why things are done?

Q Yes Q No

Ozone Treatment

101. Is an ozone unit being used?
Q Yes Q No (Go to question 115)

WATER TREATMENT II

Water System Name: _____

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102. What type of ozone contractor is being used?
ozone unit?
☐ Yes ☐ No
☐ Two-level diffuser
☐ Multistage porous diffuser
☐ Eductor system
☐ Turbine
☐ Pack bed
☐ Other _____
103. Is there an operation and maintenance manual and standard operating procedures for the ozone unit?
☐ Yes ☐ No
104. Are the temperature and pressure of the water being treated within designed specifications?
☐ Yes ☐ No
105. Is the mixing during ozonation adequate?
☐ Yes ☐ No
106. Where is the ozone injected? (Check all that apply)
☐ Intake ☐ Flash Mix

☐ Flocculation Basin ☐ Top of Filters
☐ Sedimentation Basin ☐ Clearwell
☐ Other _____
107. Are instrumentation and automatic and manual controls for the process Adequate? ☐ Yes ☐ No
Operational? ☐ Yes ☐ No
Utilized? ☐ Yes ☐ No
108. What is the condition of:
Air dryer equipment ☐ Good ☐ Fair ☐ Poor
Dewpoint monitoring ☐ Good ☐ Fair ☐ Poor
Ozone generator ☐ Good ☐ Fair ☐ Poor
Contractor ☐ Good ☐ Fair ☐ Poor
Backup equipment ☐ Good ☐ Fair ☐ Poor
Spare parts ☐ Good ☐ Fair ☐ Poor
109. How often are ozone units cleaned? _____
110. Is adequate process control testing being done to determine the effectiveness of the
111. Are safe practices followed during operation and maintenance?
☐ Yes ☐ No
112. Are the appropriate lighting, guards and railing, etc. in place?
☐ Yes ☐ No
113. Are there other safety concerns such as electrical hazards?
☐ Yes ☐ No
114. Can the operator answer basic questions about the treatment process, including what is done, as well as when and why things are done?
☐ Yes ☐ No
- Iron and Manganese
115. Is iron and manganese removal being performed?
☐ Yes ☐ No
116. What are the normal and peak concentrations of iron and manganese in the raw water?
Iron: Normal _____ Peak _____
Manganese: Normal _____ Peak _____
117. What treatment process is used to control iron and manganese? _____

118. What chemicals are applied? _____

119. Where are iron and manganese control chemicals applied? (Check all that apply)
☐ Intake ☐ Flash Mix

☐ Flocculation Basin ☐ Top of Filters
☐ Sedimentation Basin ☐ Clearwell
☐ Plant Pond
☐ Other _____

120. What are the normal and maximum feed rates?
 Normal_____ Maximum_____

WATER TREATMENT II

Water System Name:_____

Reviewer:_____

Date:_____

- | | |
|--|---|
| <p>121. Is the mixing during chemical addition adequate?
 Q Yes Q No</p> <p>122. Do daily operating records reflect dosages, chemical use, etc.?
 Q Yes Q No</p> <p>123. Are instrumentation and automatic and manual controls for the process Adequate? Q Yes Q No
 Operational? Q Yes Q No
 Utilized? Q Yes Q No</p> <p>124. Are there sufficient Backup equipment? Q Yes Q No
 Alternate processes? Q Yes Q No
 Spare parts? Q Yes Q No</p> <p>125. Is appropriate safety equipment available and in use? (For example: goggles , gloves, etc.)
 Q Yes Q No</p> <p>126. Have operators been trained to use the safety equipment?
 Q Yes Q No</p> <p style="padding-left: 40px;">Has training been documented?
 Q Yes Q No</p> <p>127. Are the appropriate lighting, guards and railings etc., in place?
 Q Yes Q No</p> <p>128. Are there other safety concerns such as electrical hazards?
 Q Yes Q No</p> <p>129. Is there an accurate line drawing of the treatment process?
 Q Yes Q No</p> <p>130. Do the following processes appear adequate?</p> | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Rapid Mix Q Yes Q No</p> <p>Flocculation Q Yes Q No</p> <p>Sedimentation Q Yes Q No</p> </div> <div style="width: 50%;"> <p>131. Does there appear to be excessive short circuiting in the flocculation/sedimentation process?
 Q Yes Q No</p> <p>132. Is there excessive floc carryover from the sedimentation process to the filter units?
 Q Yes Q No</p> <p>133. Is sludge removal from the basins adequate?
 Q Yes Q No</p> <p>134. Is there a suitable sludge plan?
 Q Yes Q No</p> <p>135. Is the NTU on top of the filter units 2 NTU or less?
 Q Yes Q No</p> <p>136. Is adequate filtration being achieved?
 Q Yes Q No</p> <p>137. Are instrumentation and automatic and manual controls for the filtration process Adequate? Q Yes Q No
 Operational? Q Yes Q No
 Utilized? Q Yes Q No</p> <p>138. Is there filter to waste capability?
 Q Yes Q No</p> <p>139. Are there individual sampling points for each filter?
 Q Yes Q No</p> <p>140. Is adequate filter backwash being achieved?
 Q Yes Q No</p> <p>141. Are proper procedures for filter backwash</p> </div> </div> |
|--|---|

being followed according to
Standard Operating Procedures
(SOP)? **Q** Yes**Q**
No

142. Is backwash water being monitored and
Disposed of according to regulations?
Q Yes **Q** No

WATER TREATMENT II

Water System Name: _____

Reviewer: _____

Date: _____

143. Is corrosion control necessary?
Q Yes **Q** No

144. If a corrosion control is being used, is the
program adequate?
Q Yes **Q** No

145. Are SOP Manuals available?
Q Yes **Q** No

146. Are MSDS available?
Q Yes **Q** No

Recommendations:

- Q Yes Q No**
- Is there at least a 0.2 mg/l disinfectant residual throughout the distribution system at all times?
Q Yes Q No
11. Are proper disinfection procedures used:
In new construction? **Q Yes Q No**
After repairs? **Q Yes Q No**
12. Is there a scheduled maintenance program?
Q Yes Q No
13. Is there a pressure monitoring program?
Q Yes Q No
14. Is there an adequate flushing program?
Q Yes Q No
x's/yr _____
15. Are there sufficient valves to isolate lines?
Q Yes Q No
16. Is there a valve maintenance program?
Q Yes Q No
17. Is there a corrosion monitoring program?
Q Yes Q No
18. What types of pipe and material are present in the distribution system?

19. Are the distribution system pipe and material ANSI/NSF certified?
Q Yes Q No
20. Does the system use:
Altitude valves? **Q Yes Q No**
Pressure reducing valves? **Q Yes Q No**
Other control valves? **Q Yes Q No**
21. Are all control valves functioning properly?
Q Yes Q No
22. Are control valves equipped with input and output pressure gauges?
Q Yes Q No
23. What is the frequency of main breaks?

24. Are there adequate repair materials on hand? **Q Yes Q No**
25. If repair materials are not on hand, how quickly can they be obtained? _____
26. Does the system have a leak detection program?
Q Yes Q No
27. Does the system have an adequate safety policy?
Q Yes Q No

DISTRIBUTION

Water System Name: _____

Reviewer Name: _____

Date: _____

28. Are safety practices followed during distribution system operation and repairs?
Q Yes **Q** No

Role of the fire department in the determination of types and locations of new hydrants?

Q Yes **Q** No

29. Does the system have a backflow prevention program?
Q Yes **Q** No

Policy for fire department to report water usage to the utility?

Q Yes **Q** No

30. Have all service connections been prioritized according to health hazard?
Q Yes **Q** No

36. What is the unaccounted for water percentage? _____

31. Is the utility requiring protection on service connections with health hazards?
Q Yes **Q** No

32. Have backflow prevention devices been installed at appropriate locations such as wastewater plants, hospitals, industrial locations, etc.?
Q Yes **Q** No

33. Have any of the following backflow prevention assemblies been installed?
Air gaps? **Q** Yes **Q** No
Vacuum breaker? **Q** Yes **Q** No
Double check valves? **Q** Yes **Q** No
Reduced pressure devices **Q** Yes **Q** No
Other _____ **Q** Yes **Q** No

34. Is there a program to annually inspect and test the backflow prevention assemblies?
Q Yes **Q** No

35. Have the following been established between the water utility and the local fire departments?

Policy and procedure for notifying the fire department when hydrant is out of service? **Q** Yes **Q** No

Procedure for notifying the utility when the fire department uses a hydrant? **Q** Yes **Q** No

Role of the fire department in the inspection and flushing of hydrants? **Q** Yes **Q** No

FINISHED WATER STORAGE IV

Water system Name: _____

Reviewer Name: _____

Date: _____

1. If the tank is a hydropneumatic type what is the:
Cut in pressure _____ Cut out
pressure _____ Air to
water ratio _____
2. Are instruments and controls adequate and operational?
☐ Yes ☐ No
3. Are instruments and controls utilized and maintained?
☐ Yes ☐ No
4. Are instruments and controls locked and properly protected?
☐ Yes ☐ No
5. Does low pressure level provide adequate distribution pressure?
☐ Yes ☐ No
6. Are backup systems provided?
☐ Yes ☐ No
7. Is there a bypass so the tank can be taken out of service?
☐ Yes ☐ No
8. Has professional inspection been performed to determine interior and exterior surface conditions and structural integrity of the tank?
☐ Yes ☐ No
Date of inspection: _____
9. Are interior coatings ANSI/NSF 61 approved?
☐ Yes ☐ No
10. Is the storage system designed for "direct pumping" into the distribution system?
☐ Yes ☐ No
11. Is the storage system designed to "float" on the distribution system?
☐ Yes ☐ No
12. Is the tank managed to provide turnover to prevent stale water?
☐ Yes ☐ No
13. Are overflow lines, air vents, drainage lines, or clean out pipes:
Turned down and covered? ☐ Yes ☐ No
Screened? ☐ Yes ☐ No
Terminated a minimum of three pipe diameters above the ground or storage tank surface?
☐ Yes ☐ No
14. Is the drain from the tank connected to a storm water or sewer drain?
☐ Yes ☐ No
If yes, is there an air gap? ☐ Yes ☐ No
15. Does the overflow piping extend a minimum of ten feet downgrade from the foundation of the tank?
☐ Yes ☐ No
16. Does surface runoff and underground drainage flow away from the storage structure?
☐ Yes ☐ No
17. Is the tank site protected against:
Flooding? ☐ Yes ☐ No
Icing? ☐ Yes ☐ No
Vandalism? ☐ Yes ☐ No
18. Are the tank hatches locked and properly protected?
☐ Yes ☐ No
19. Are tanks equipped with cathodic protection?
☐ Yes ☐ No
20. Can the tank be isolated from the distribution system?
☐ Yes ☐ No
21. Are there provisions for maintaining the water supply when the storage tank is out of service for maintenance or emergency situations?
☐ Yes ☐ No
22. Are storage tanks disinfested in accordance

to regulations following interior
maintenance?
Q Yes Q No

FINISHED WATER STORAGE IV

Water system Name: _____
Reviewer Name: _____
Date: _____

23. Is there a tap that can give a representative
sample from the tank?
Q Yes Q No

24. Are bacteriological samples collected and
analyzed following tank maintenance?
Q Yes Q No

Recommendations:

25. Are safety precautions being followed
during routine tank operation and
maintenance?
Q Yes Q No

26. Are safety climbing devices installed on the
tank?
Q Yes Q No

27. If the tank is in the vicinity of an airport or
flight path are proper markings and lighting
installed and maintained according to
Federal Aviation Regulations?
Q Yes Q No

28. Does the tank foundations appear
structurally sound?
Q Yes Q No

Distribution Pumps, Facilities & Controls

Water system Name: _____

Reviewer Name: _____

Date: _____

- | | |
|---|--|
| <p>1. Are NSF approved lubricants used?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>2. Is the appropriate amounts of lubricant used?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>3. Are the following control systems reliable and protected?
 Low Suction <input type="checkbox"/> Yes <input type="checkbox"/> No
 Pressure <input type="checkbox"/> Yes <input type="checkbox"/> No
 Lightning <input type="checkbox"/> Yes <input type="checkbox"/> No
 Phase Protection <input type="checkbox"/> Yes <input type="checkbox"/> No
 Thermal <input type="checkbox"/> Yes <input type="checkbox"/> No
 Other _____ <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>4. Are emergency/backup power systems provided?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>5. Are emergency/backup power systems exercised under load regularly?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>6. Do rotating and electrical equipment have protective guards?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>7. Are the facilities maintained properly?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>8. Are the facilities properly protected and locked?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>9. Are underground compartments and suction</p> | <p>wells:
 Waterproof? <input type="checkbox"/> Yes <input type="checkbox"/> No
 Vented? <input type="checkbox"/> Yes <input type="checkbox"/> No
 Locked? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>10. Are permanent mounted ladders :
 Structurally sound? <input type="checkbox"/> Yes <input type="checkbox"/> No
 Firmly anchored? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>11. Are ladder anchor points corroding?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>12. Are there any cross connections present?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>13. Are there adequate records of:
 Operational data?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>14. Are the rated capacities of the pumps adequate?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>15. Are information tags on the pumps and motors present and readable?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>16. Is the pump packing adjusted properly?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>17. Are drains and/or sump pumps functional?
 <input type="checkbox"/> Yes <input type="checkbox"/> No</p> |
|---|--|

18. Are pumping facilities equipped with climate control devices?
Q Yes **Q** No
19. Are equipment manuals readily available?
Q Yes **Q** No
20. Are safety issues such as confined spaces, lockout/tagout, etc. Being addressed?
Q Yes **Q** No

Recommendations:

MONITORING, REPORTING & DATA VERIFICATION

Water System Name: _____

Reviewer Name: _____

Date: _____

- | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------|--------------|----------|---------------|--------------|----------|---------------------|--------------|-------------|-------------|--------------|-------------|-------------------|--------------|-------------|--|-------------|--------------|-------------|-----|--------------|-------------|------------|--------------|-------------|
| <ol style="list-style-type: none"> 1. Are maps maintained to identify sampling points?
Q Yes Q No 2. Is there adequate monitoring in the distribution system?
Q Yes Q No 3. Are the sampling points rotated?
Q Yes Q No 4. Is there adequate process control monitoring for: <table border="0" style="margin-left: 20px;"> <tr> <td>PH</td> <td>Q Yes</td> <td>Q</td> </tr> <tr> <td>No Alkalinity</td> <td>Q Yes</td> <td>Q</td> </tr> <tr> <td>No Calcium Hardness</td> <td>Q Yes</td> <td>Q No</td> </tr> <tr> <td>Temperature</td> <td>Q Yes</td> <td>Q No</td> </tr> <tr> <td>Chlorine Residual</td> <td>Q Yes</td> <td>Q No</td> </tr> </table> | PH | Q Yes | Q | No Alkalinity | Q Yes | Q | No Calcium Hardness | Q Yes | Q No | Temperature | Q Yes | Q No | Chlorine Residual | Q Yes | Q No | <table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">Corrosivity</td> <td>Q Yes</td> <td>Q No</td> </tr> <tr> <td>HPC</td> <td>Q Yes</td> <td>Q No</td> </tr> <tr> <td>Other_____</td> <td>Q Yes</td> <td>Q No</td> </tr> </table> <ol style="list-style-type: none"> 5. Is the operator following proper sampling and testing procedures?
Q Yes Q No 6. Are monthly operating reports (MOR's) submitted in a timely manner?
Q Yes Q No 7. Are the proper number of samples being collected?
Q Yes Q No 8. Is effective communication procedures | Corrosivity | Q Yes | Q No | HPC | Q Yes | Q No | Other_____ | Q Yes | Q No |
| PH | Q Yes | Q | | | | | | | | | | | | | | | | | | | | | | | |
| No Alkalinity | Q Yes | Q | | | | | | | | | | | | | | | | | | | | | | | |
| No Calcium Hardness | Q Yes | Q No | | | | | | | | | | | | | | | | | | | | | | | |
| Temperature | Q Yes | Q No | | | | | | | | | | | | | | | | | | | | | | | |
| Chlorine Residual | Q Yes | Q No | | | | | | | | | | | | | | | | | | | | | | | |
| Corrosivity | Q Yes | Q No | | | | | | | | | | | | | | | | | | | | | | | |
| HPC | Q Yes | Q No | | | | | | | | | | | | | | | | | | | | | | | |
| Other_____ | Q Yes | Q No | | | | | | | | | | | | | | | | | | | | | | | |

being maintained between the
water system and the lab?

Q Yes**Q** No

9. What is the name of the certified lab being
used? _____

10. Are copies of monitoring results on-site, for
each rule?

Q Lead and copper (Pb/Cu)

Q Radionuclides (Rads)

Q Inorganic chemicals (IOCs)

Q Synthetic organic chemicals (SOCs)

Q Volative organic chemicals (VOCs)

Q Nitrate/Nitrite (NO₃/NO₂)

Q Fluoride (Fl)

Q Total coliform rule (TCR)

Q Turbidity (Turb)

11. Are copies of the following on file if
appropriate?

Q Copy of Waivers

Q Production Permits

Q Withdrawal Permits

Q G/W Use Permits

Q NPDES/GAWP 10000 Permit

Recommendations:

WATER SYSTEM MANAGEMENT & OPERATIONS VII

Water System Name:_____

Reviewer Name:_____

Date: _____

- | | |
|--|---|
| <p>1. Does the system have a sufficient number of certified operators at all times?
Q Yes Q No</p> <p>2. Are there sufficient facilities to store parts inventory, equipment, vehicles, traffic control devices, lawn equipment and supplies?
Q Yes Q No</p> <p>3. Are there adequate facilities for the system personnel?
Q Yes Q No</p> <p>4. Have personnel been adequately trained?
Q Yes Q No
Are there on-going training programs?
Q Yes Q No
Do certified personnel attend training required for certification renewal?
Q Yes Q No</p> <p>5. Does the employee turnover rate or the absentee rate appear high?
Q Yes Q No</p> <p>6. Is there a formal organizational chart?
Q Yes Q No</p> <p>7. What is the general procedure to obtain needed parts or maintenance?

_____</p> <p>Can the needed parts or maintenance be secured without affecting system performance?
Q Yes Q No</p> <p>8. Are administrators familiar with plant needs?
Q Yes Q No</p> <p>9. Are there long-range plans for:
Facility replacement Q Yes Q No
Alternative sources Q Yes Q No
Emergency response Q Yes Q No
Long range budgeting Q Yes Q No</p> | <p>10. Does the utility maintain a complaint log detailing the location and nature of complaints?
Q Yes Q No</p> <p>11. Does the governing body appear to be effective in overseeing the operation and maintenance of the water system?
Q Yes Q No</p> <p>12. Does the utility have an active public education program?
Q Yes Q No</p> <p>13. Does there appear to be adequate communication between the manager (superintendent) and the governing body?
Q Yes Q No</p> <p>14. Does there appear to be adequate communication between the manager and the workers?
Q Yes Q No</p> <p>15. Is there cooperation between the water office and other municipal offices?

_____</p> <p>16. When was the last accident? _____
When was the last "serious" accident causing workday loss? _____</p> <p>17. Does the utility have a confined space entry program?
Q Yes Q No</p> <p>18. Are the appropriate safety equipment and protective clothing available?
Q Yes Q No</p> <p>19. Have the operators been adequately trained in safety procedures and equipment?
Q Yes Q No

Has training been documented?
Q Yes Q No</p> |
|--|---|

WATER SYSTEM MANAGEMENT & OPERATIONS VII

Water System Name: _____

Reviewer Name: _____

Date: _____

- | | |
|--|---|
| <p>20. Has the utility compiled with the hazardous communication act as required by OSHA?
Q Yes Q No
Q N/A</p> <p>21. Does the water system have a written “mission statement” or “statement of purpose”?
Q Yes Q No</p> <p>22. Does the utility have on file all documents relating to the origination or incorporation of the legal entity which is authorized to operate the system?
Q Yes Q No</p> <p>23. Does the system have other written documents or information to provide orientation and/or training to new members of the Board on duties and responsibilities of their position?
Q Yes Q No</p> <p>24. Do the rules and regulations governing system operation include the following provisions covering:
The water system’s responsibilities to the customer?
Q Yes Q No
The customer’s responsibility for receiving service?
Q Yes Q No
The connection fees and deposits required for service?
Q Yes Q No</p> <p>25. Do the rules and regulations governing the system operations include provisions for:
The current rate schedule for each classification of customer (residential and commercial)?
Q Yes Q No
The procedures for handling and resolving customer complaints?
Q Yes Q No
The dates of monthly billings and late payment charges, if any?
Q Yes Q No</p> | <p>26. Do the rules and regulations governing system operations include provisions for:
Past due accounts, collections, and conditions for shut-off and restoration service?
Q Yes Q No
Prospective customers having excessive requirements for service?
Q Yes Q No
Conditions under which water main extensions for connecting new customers may be made?
Q Yes Q No</p> <p>27. Do the rules and regulations governing system operations include procedures for making exceptions to the rules and provisions for amending the rules and regulations?
Q Yes Q No</p> <p>28. Have customers been provided with rules and regulations of the system?
Q Yes Q No</p> <p>29. Does the governing Board hold regularly scheduled publically announced meeting?
Q Yes Q No</p> <p>30. Is there a written agenda prepared for each Board meeting?
Q Yes Q No</p> <p>31. Are accurate minutes and records of all Board meetings and actions prepared and maintained?
Q Yes Q No</p> <p>32. Are members of the public given time for comment at Board meetings?
Q Yes Q No</p> <p>33. Are vacancies on the governing Board promptly and legally filled?
Q Yes Q No</p> |
|--|---|

34. Are meetings frequently canceled because of the lack of quorum?
Q Yes **Q** No

WATER SYSTEM MANAGEMENT & OPERATIONS VII

Water System Name: _____

Reviewer Name: _____

Date: _____

35. Copies of approved Well Head Protection Plan?
Q Yes **Q** No

36. Copies of approved Water Protection Plan?
Q Yes **Q** No